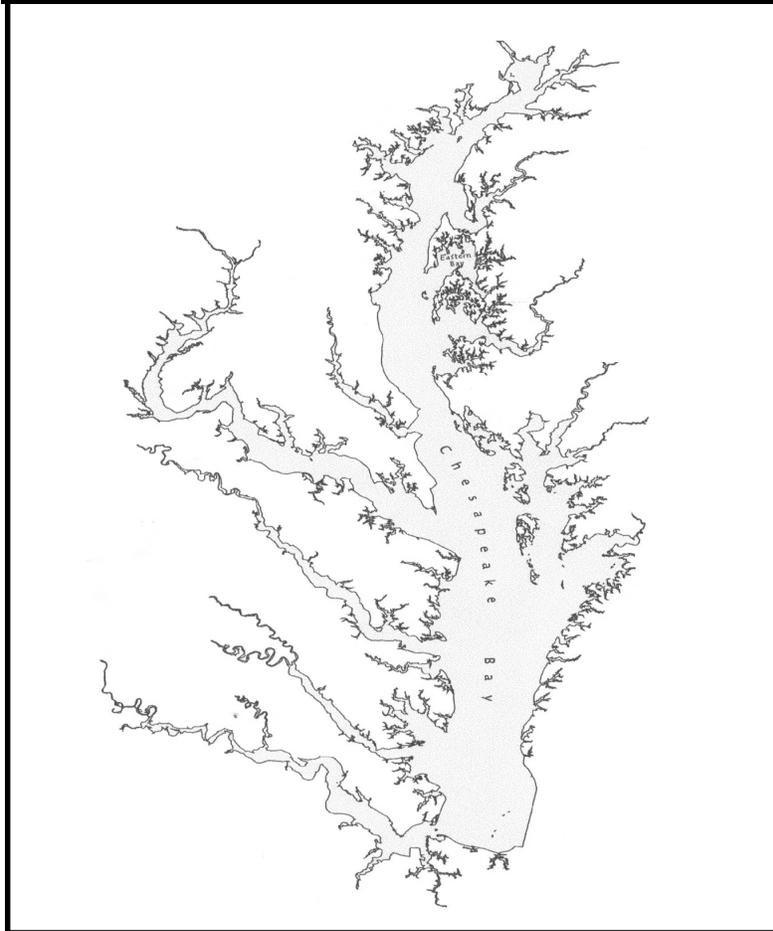


**Chesapeake Bay
Governor's School**
for Marine & Environmental Science

**23rd Annual
Science Symposium**



**Virginia Commonwealth University
Student Commons
Saturday, March 7, 2026
9:00 a.m. – 2:00 p.m.**

CBGS Faculty

Claire Adrian-Tucci
James Beam
Sara Chaves Beam
CeeCee Bishop
Robin Carey
Tracie Fulks
Dr. Kevin Goff
Dr. Vinh Hoang
Meredith Jones
Jennifer Magruder
Kim Olsen
Katelyn Orem
Chenoa Payne
Phillip Sanderson
Brooke Sanders
Lynn Smith

CBGS Staff

Teresa Drumheller
Rose Jones
Lindsay Knight
Michele Phillips

CBGS Director

Dr. Rob Wright



Program Schedule

8:30 **Judges' Meeting**

8:50 **Report to Rooms for Introduction**

9:00-11:45 **Student Presentations**

- Commons Theater
- Richmond Salon I
- Richmond Salon II
- Richmond Salon III
- Richmond Salon IV
- Virginia Room A-B
- Virginia Room C-D
- SGA Senate Chambers

11:45-12:45 **Lunch**

12:55 **Commonwealth Ballroom
Welcome**

Dr. Rob Wright
Director

Introduction of Speaker

Claire Adrian-Tucci
Science Faculty

1:00-1:30 **Keynote Address**

“From the car to the classroom: The effects of multitasking in real-world situations”

Dr. Jonathan Schacherer
Professor, Haverford College

1:30-2:00 **Awards Ceremony and Closing Remarks**

Dr. Rob Wright
Marine and Environmental Science Faculty

Student Presentations by Last Name

Travis Archer	Richmond Salon III	9:40
Clyde Ash	Richmond Salon I	10:30
Joel Barber	Richmond Salon IV	11:30
Tinsley Beazley	Richmond Salon III	9:00
Sydney Bedford	SGA Senate Chambers	9:20
William Bowers	Richmond Salon II	9:20
Avery Boyd	Virginia Room C-D	9:40
Delaney Brown	Richmond Salon III	10:50
Olivia Cooke	Commons Theater	9:40
Layla Cordova	Richmond Salon IV	10:50
Elizabeth Dawkins	SGA Senate Chambers	9:40
Autumn Dove	Richmond Salon IV	9:40
Kevin Finotti	Richmond Salon III	10:00
Ryan Ford	Commons Theater	10:50
Tania Graham	SGA Senate Chambers	10:00
Zion Graham	Virginia Room A-B	11:30
Josh Hamza	Richmond Salon IV	11:10
Kaitlyn Hargrove	Richmond Salon IV	10:30
Andrew Harrow	Richmond Salon I	9:40
Felicity Hartlove	Richmond Salon II	10:50
Josh Hartso-Smith	Virginia Room A-B	10:00
Sean Headley	Richmond Salon I	9:20
Samantha Hensarling	Richmond Salon I	10:00
Abigail Hensley	Richmond Salon III	9:20
Gracie Hill	Virginia Room A-B	10:30
Miles Hollingsworth	Virginia Room C-D	10:30
Sterling "Ray" Hudgins	SGA Senate Chambers	10:30
Teghan Jackson	SGA Senate Chambers	10:50
Natalie Johnson (BG)	Richmond Salon IV	9:20
Natalie Johnson (Glenns)	Virginia Room C-D	11:30
Madison Jones	Richmond Salon III	10:30
Samuel Keelson	Commons Theater	10:00

Charlotte Kirby	Commons Theater	11:30
Eamon Kittle	SGA Senate Chambers	11:10
Amia Layne	Virginia Room A-B	9:00
Kalin Lee	Richmond Salon I	10:50
Samantha Madren	Virginia Room A-B	11:10
Thomas Major	Richmond Salon II	11:10
Caison "Gunnar" Marston	Richmond Salon IV	10:00
Oneal Mathews	Richmond Salon I	9:00
Nathan Meberg	Richmond Salon IV	9:00
Cameron Minor	Richmond Salon I	11:30
Rebecca Nguyen	Virginia Room A-B	9:40
Keegan Orem	Virginia Room C-D	11:10
Porter Pittman	Richmond Salon III	11:30
Scott Randall	SGA Senate Chambers	11:30
Nathan Reganon	SGA Senate Chambers	11:30
Cason Rogers	Virginia Room C-D	9:20
Julia Roland	Richmond Salon II	9:00
Samuel Roscoe	SGA Senate Chambers	9:00
Georges Saison	Commons Theater	10:30
Ivan Schaible	Virginia Room A-B	9:20
Jamie Segar II	Commons Theater	11:10
Elizabeth Shelton	Richmond Salon III	11:10
Coby Southworth	Richmond Salon II	10:30
Avery Stahl	Virginia Room C-D	10:00
Mercedes Stevens	Richmond Salon II	11:30
Steven Thompson	Richmond Salon II	10:00
Shane Tyrrell	Commons Theater	9:20
Chase Wallace	Richmond Salon II	9:40
Ella Ward	Richmond Salon I	11:10
Sophie Ward	Virginia Room C-D	9:00
Lee "Trey" Williams	Commons Theater	9:00
Kindred Worrell	Virginia Room A-B	10:50

9:00 - 9:15		
Lee "Trey" Williams	Analysis of Bias in AI Facial Recognition Systems by Gender and Age	Commons Theater
Oneal Matthews	Evidence for a Correlation Between Freshwater Snail Density and Filamentous Algae Coverage in Fluvial Environments in Virginia's Rivers	Richmond Salon I
Julia Roland	A Comparison of Eastern Oyster (<i>Crassostrea virginica</i>) Growth and Diversity Between Floating and Bottom Caged Environments	Richmond Salon II
Tinsley Beazley	A Correlation between Short-Term and Working Memory and Cognitive Ability in Children	Richmond Salon III
Nathan Meberg	How Northern Snakehead, <i>Channa argus</i> , affect Aquia Bass Populations	Richmond Salon IV
Amia Layne	The Impact of Family History and Allergen Exposure on Student Allergy Severity	Virginia Room A-B
Sophie Ward	The Virginia School Phone Ban Effect on Student Academic Performance and Social Engagement	Virginia Room C-D
Samuel Roscoe	The Short-Term Effect of Creatine Monohydrate on Performance during Strength Training	SGA Senate Chambers

9:20 - 9:35		
Shane Tyrrell	The Effect of Interspecific Competition between Green Algae (<i>Chlorella vulgaris</i>) and Cyanobacteria (<i>C. anabaena</i>) Under Eutrophic Conditions	Commons Theater
Sean Headley	The Impact of Solar Farm Distance on Zinc Concentrations in Private and Public Water Supplies	Richmond Salon I
William Bowers	How Does Burning Shredded Tires Affect the Surrounding Soil?	Richmond Salon II
Abigail Hensley	A Comparison Between Cognitive Function and Age in the NNK	Richmond Salon III
Natalie Johnson (BG)	A Comparison of Papaya Seed-Derived Benzyl Isothiocyanate and the Synthetic Repellents DEET and Permethrin on Lone Star Ticks (<i>Amblyomma americanum</i>)	Richmond Salon IV
Ivan Schaible	Investigating the Functionality of a Post Larval Collector for Assessing Juvenile <i>Callinectes sapidus</i> Recruitment	Virginia Room A-B
Cason Rogers	How Moon Phases Affect Fishing in the Chesapeake Bay	Virginia Room C-D
Sydney Bedford	Our Fecal Footprint: An Analysis of <i>E. coli</i> Concentrations in Aimes Creek Following the Westmoreland County Master Sewer Plan	SGA Senate Chambers

9:40 - 9:55		
Olivia Cooke	A Comparative Study on Catch Efficiency and Fouling Accumulation between Galvanized and Vinyl-Coated Crab Pots	Commons Theater
Andrew Harrow	A Comparison of Real and Artificial Fish Bait Effectiveness in the Lower Rappahannock River	Richmond Salon I
Chase Wallace	A Study of Coastal Flooding Events in Virginia	Richmond Salon II
Travis Archer	The Downfall of <i>Hedera helix</i> , an Aggressive Invader	Richmond Salon III
Autumn Dove	The Power of the King: How King Tides Affect Nutrients and Bacteria Along the Coast	Richmond Salon IV
Rebecca Nguyen	A Comparison of Phragmites Reeds and Cordgrass Reeds as Nesting Material for Solitary Bees	Virginia Room A-B
Avery Boyd	The Effect of Different Personality Compositions from the Introversion-Extraversion Spectrum on Teamwork	Virginia Room C-D
Elizabeth Dawkins	Investigating the Diversity and Abundance of <i>Vibrio</i> Bacteria Found in Eastern Oysters in the Lower Chesapeake Bay	SGA Senate Chambers

10:00 - 10:15		
Samuel Keelson	The Effect of Salinity Changes on the Growth and Germination Rate of Swamp Milkweed (<i>Asclepias incarnata</i>)	Commons Theater
Samantha Hensarling	Attenuation Effect of Common Household Materials on Beta/Gamma Radiation from Potassium-40	Richmond Salon I
Steven Thompson	The Relationship between Shoreline Fish Density and Human Activity in a Recreational Lake Setting	Richmond Salon II
Kevin Finotti	The Prevalence of Native and Non-Native Birds at Birdfeeders	Richmond Salon III
Caison "Gunnar" Marston	Utilization of Shallow Water Habitat by Juvenile Fish in Two Chesapeake Bay Tributaries	Richmond Salon IV
Josh Hartso-Smith	Comparing the Growth Rate Between Aquaponics, Hydroponics, and Composting in a Home Environment	Virginia Room A-B
Avery Stahl	A Survey of the Copepod Population in Urbanna Creek During Summer 2025	Virginia Room C-D
Tania Graham	How Do Natural and Chemically Based Cleaning Products Affect the Hatch Rate and Mortality of Brine Shrimp?	SGA Senate Chambers

10:15 - 10:25 BREAK		
	No Student Presentation	Commons Theater
	No Student Presentation	Richmond Salon I
	No Student Presentation	Richmond Salon II
	No Student Presentation	Richmond Salon III
	No Student Presentation	Richmond Salon IV
	No Student Presentation	Virginia Room A-B
	No Student Presentation	Virginia Room C-D
	No Student Presentation	SGA Senate Chambers

10:30 - 10:45		
Georges Saison	How might Forest Clear-Cutting and Tree Buffer Width Affect the Variability of Vernal Pools?	Commons Theater
Clyde Ash	The Effect of Elevated Water Temperature on the Growth of <i>Hydrilla verticillata</i>	Richmond Salon I
Coby Southworth	The Effect of <i>Hydrilla verticillata</i> Density on Phosphate Levels	Richmond Salon II
Madison Jones	How Does Phone Use in Adolescents Affect Mood and Sleep Patterns?	Richmond Salon III
Kaitlyn Hargrove	Assessing Future Vulnerability of Four OBX Coastal Communities by Observing Historical Changes in Shoreline Position	Richmond Salon IV
Gracie Hill	Sirens, Ear Protection and Firefighters Hearing	Virginia Room A-B
Miles Hollingsworth	A Comparison of Growth Rate of Eastern Oyster (<i>Crassostrea virginica</i>) in Cranes Creek, Great Wicomico, and Little Wicomico Rivers	Virginia Room C-D
Sterling "Ray" Hudgins	Examining Cooling Effectiveness and Aesthetic Value of Vertical Greenery Systems	SGA Senate Chambers

10:50 - 11:05		
Ryan Ford	The Effect of Boating Frequency on the Abundance of Aquatic Wildlife in Shallow Waters	Commons Theater
Kalin Lee	The Effect of Arbuscular Mycorrhizae on Corn Growth	Richmond Salon I
Felicity Hartlove	A Study on Improving Literacy in High School Students	Richmond Salon II
Delaney Brown	The Effect of In-Person Experiential Tours and Video Documentaries on Belief in the Paranormal	Richmond Salon III
Layla Cordova	Impacts Due to Ghost Crab Pots in Chesapeake Bay Shallow Water Ecosystems	Richmond Salon IV
Kindred Worrell	The Effect of Fruit Related Pesticide Exposure on <i>Drosophila melanogaster</i> Survival and Reproduction	Virginia Room A-B
	No Student Presentation	Virginia Room C-D
Teghan Jackson	How Different Cleaning Cloths Affect Bacteria Levels	SGA Senate Chambers

11:10 - 11:25		
Jamie Segar II	Assessing Food Waste and Prevention Strategies in Local Schools and Its Impact	Commons Theater
Ella Ward	Build, Code, Deploy: Using a DIY Ultrasonic Water Level Sensor for High School Citizen Science	Richmond Salon I
Thomas Major	Torpedo Bat: Hype or Hits?	Richmond Salon II
Elizabeth Shelton	The Effect of Ocean Warming on the Frequency and Strength of Landfalling Hurricanes	Richmond Salon III
Josh Hamza	The Effect of Coordination-Based Video Game Playing on Reaction Time in a Hand-Eye Coordination Task	Richmond Salon IV
Samantha Madren	The Correlation between the Amount of Preschool and Later Academic Achievement in Elementary School	Virginia Room A-B
Keegan Orem	The Effect of Terrain on Cross Country Running Times and Biomechanics	Virginia Room C-D
Eamon Kittle	The Potential of the Slime Mold <i>Physarum polycephalum</i> to Optimize Maritime Operations in the Gulf of Mexico	SGA Senate Chambers

11:30 - 11:45		
Charlotte Kirby	Football Player Hydration and Readiness During High Temperature Summer Practices	Commons Theater
Cameron Minor	A Comparison of Razor Clams to other Baits on Crab Catch in the Chesapeake Bay	Richmond Salon I
Mercedes Stevens	The Effect of Music Genre on Human Heart Rate, Blood Pressure, and Stress and Anxiety Levels in a Music Therapy Setting	Richmond Salon II
Porter Pittman	Going Bananas for Composting	Richmond Salon III
Joel Barber	The Effect of Varying Levels of Nitrogen Supplementation on Lettuce (<i>Lactuca sativa</i>) Growth in a Low-Pressure Aeroponics System	Richmond Salon IV
Zion Graham	Which Training Method Shows the Most Improvement in Physical Reaction Time?	Virginia Room A-B
Natalie Johnson (Glenns)	DubStep: An Algorithm for Dubins' Path Planning	Virginia Room C-D
Scott Randall and Nathan Reganon	High Intensity vs. Low Intensity Exercise in Terms of Muscular Performance and Body Fat	SGA Senate Chambers

Senior Mentors

On behalf of the Chesapeake Bay Governor's School students and staff, we extend our gratitude to the mentors for sharing their expertise and encouragement with our seniors in the preparation and presentation of research projects. We are looking for mentors for future student research projects. If you know someone who may be interested, please contact CBGS.

**Dr. Rob Wright
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Thank You

We would like to extend a special thank you to all the judges participating in today's program. Our students and teachers appreciate your attention to detail and valuable feedback.

Judges

Ms. Celia Cackowski, *Marine Education Specialist, Virginia Institute of Marine Science*

Ms. Oluwakemi Dada, *Graduate Student, Virginia Institute of Marine Science*

Mr. Carlos Disla, *Geographic Information Systems Coordinator, Essex County; Former CBGS Faculty*

Dr. Lexi Duscher, *Research Methods Teacher, New Horizons Governor's School for Science and Technology; Research Scientist, University of Florida; Former CBGS Faculty*

Mr. Eric Echard, *Mission Analyst, United States Department of the Navy; Former CBGS Faculty*

Mr. Mark Hall, *Mathematics and Science Teacher, University of Virginia; CBGS Alumnus*

Ms. Paula Jasinski, *President and Founder, Green Fin Studio*

Dr. Grayson Johnson, *Chemical Engineering Research Associate; CBGS Alumnus*

Dr. Darcy Mays, *Executive Associate Dean for Administration and Analytics, Virginia Commonwealth University*

Ms. Erin-Darby McClain, *Graduate Student, Virginia Commonwealth University; CBGS Alumnus*

Mr. Richard Moncure, *Science Teacher, Chesapeake Academy*

Ms. Suzanne Nguyen, *Chemistry Lecturer, University of Mary Washington; Civil Engineering PhD Candidate, University of Virginia; Former CBGS Faculty*

Dr. Charles Rosenbaum, *Retired Clinical Professor of Family Medicine, Medical College of Virginia/ Virginia Commonwealth University*

Mr. Hugh Sullivan, *Federal Estuary Monitoring Specialist; Former Biology Teacher; Virginia Commonwealth University Biology BS '96, MS '98*

Dr. Daniel Wallace, *Senior Human Factors Engineer, Basic Commerce and Industries; CBGS Joint School Board Chairman*

Mr. David Wright, *Retired United States Coast Guard; Retired Physics and Mathematics Teacher; Former CBGS Faculty*

University Student Commons

